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THE GROWTH OF DOMESTIC CAPITAL MARKETS, PARTICULARLY IN DEVELOPING COUNTRIES, AND ITS RELATIONSHIP WITH FOREIGN PORTFOLIO INVESTMENT

Issues for consideration

Note by the UNCTAD secretariat

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I. INTRODUCTION

1. The 1990s open a new era of capital mobility whereby private capital flows assume an increasing role as a source of finance for emerging markets. A noticeable feature of the new system of private financial transfer is that capital flows are increasingly channelled through securities markets and portfolio investment has become an important component of private flows. Over the period 1990-1996, the cumulative value of portfolio investment to emerging markets was roughly equal to the cumulative value of foreign direct investment (FDI), reaching around $410 billion and representing about 40 per cent of total private capital flows.[1]

2. The new pattern of capital flows has been influenced by a number of factors,[2] most particularly by the growth of emerging capital markets and the widespread liberalization and globalization of financial markets. Between 1987 and 1996, emerging stock market capitalization grew by nearly 600 per cent and its share of world market capitalization increased from nearly 4 per cent in 1987 to 11 per cent in 1996. By the end of 1996, over 20,000 companies were listed and traded on emerging capital markets. Furthermore, borrowers from emerging markets have been successful in tapping international financial markets through issuance of bonds and equities.

3. The integration of emerging market countries into the global financial system can bring substantial benefits. It allows these countries to raise additional foreign savings to finance investment. It can foster the development of domestic financial institutions and markets and promote the transfer of technological know-how in the area of financial management, as well as improve corporate governance through better disclosure and accounting standards. However, as the recent experiences of emerging markets have shown, the rapid integration into global financial markets also carries risks of financial crisis and disruption. Capital mobility has reduced the policy autonomy of countries, and domestic economies are more exposed to markets' sentiment.

4. Private capital flows have become more volatile, as countries have tended to rely on short-term borrowing, either through bank lending or issuance of short-term bonds. Also, portfolio investment has contributed to increasing the volatility of capital flows, since investors can easily sell their assets on securities markets. The occurrence of boom-bust cycles through overexposure and sudden generalized withdrawals of foreign investment can cause major disruptions to domestic financial systems not only through drastic changes in liquidity, but also through changes in asset prices, which rapidly transmit the shock waves of financial crisis from one emerging market to another.

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[1] Source of data: International Monetary Fund, *International Capital Markets*, November 1997, table 13, p. 28. Emerging markets comprise developing countries, countries in transition and other economies (Hong Kong; Israel; People's Republic of China; Republic of Korea; Singapore; and Taiwan Province of China).

[2] See UNCTAD: *World Investment Report 1997*, chapter III, "Foreign portfolio equity investment".

5. The increasing importance of portfolio investment as a source of finance poses a number of challenges. The policy agenda needs to address the following questions, in relation to the management of capital flows which are of interest to a wide range of developing countries and countries in transition:

- How to attract more stable capital flows? Is it a matter of retaining markets' confidence through "good fundamentals"? Or are more interventionist measures needed to manage capital flows?
- To what extent should countries strengthen domestic capital markets, particularly the banking sector, before opening to foreign investment?
- What can be done at the international level to reduce the volatility of capital flows?

6. Perhaps no easy answer can be provided to these questions. In addressing them, it would be necessary to reach a better understanding of several issues, such as the determinants of investors' behaviour, the influence of portfolio investment on the growth of domestic capital markets and the role of markets and fundamentals in explaining investment volatility.

II. THE CHANGING NATURE OF FINANCIAL MARKETS

7. As noted above, private capital flows to a large extent are channelled through securities markets: in 1996, the share of syndicated bank loans in total medium-term finance raised by emerging markets on international capital markets was only 26 per cent, while portfolio investment in equities and bonds represented the remaining part.[3] This phenomenon reflects fundamental structural changes in international financial markets and the growing role of institutional investors.

Securitization

8. The term "securitization"[4] refers to the process whereby finance is raised through the issuance of debt and equity securities, which are tradable on financial markets. Securitization thus implies that the investor or lender is holding a tradable claim on the borrower or the issuing company and can sell it at any time on markets. This contrasts with bank loans, which are assets that are usually held to maturity by traditional financial institutions.

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[3] OECD, *Financial Market Trends*, No. 68, November 1997. The share of syndicated bank loans in the volume of finance raised by all countries was 22 per cent in 1996.

[4] The term is used here in its broad sense. Originally, it was used narrowly to mean the process by which traditional bank or thrift institution assets, mainly loans or mortgages, are converted into negotiable securities. In its broader sense, securitization means the tendency of financial transactions to be conducted on securities markets and suggests disintermediation of the banking system as investors and borrowers bypass banks and transact business directly. See: Bank for International Settlements: *Recent Innovations in International Banking*, April 1986; Richard O'Brien, *Global Financial Integration: The End of Geography*, London, Royal Institute of International Affairs, 1992; IMF, *International Capital Markets*, November 1997, Annex VI.

9. Securitization is partly the result of easier access to information by a greater number of players in the markets, thus reducing barriers to entry. It also contributes to a reduction in the cost of capital raised by economic entities. The increasing role of institutional investors is responsible for the strong development of securities markets. In addition, the unbundling of different market risks through the trading of increasingly complex financial derivatives further deepens the securitization process.

10. While securitization and globalization of financial markets can widen the range of sources of finance and provide better access to international financial markets at lower cost, this access remains restricted to a small number of borrowers. Another challenge is the greater potential for volatility in investment flows and the resulting large fluctuations in asset prices. The greater volatility in those prices carries the risk of larger losses and may threaten the viability of some market participants. Furthermore, risk of contagious spreading of financial crisis is high, as market prices can also transmit shocks rapidly from one market to another.

11. Securitization of capital flows has other implications. Except in the case of hedge funds, which can be highly leveraged (relying on bank loans to finance their investments), portfolio investors usually absorb losses due to falling emerging stock and bond markets out their own funds. This does not pose a systemic threat to the stability of the international financial system[5] since losses are ultimately spread among a large number of private investors. Moreover, investments in emerging markets are very often but a small portion of the portfolio of large investment funds. The possibility of widespread redemption of investment fund shares by panicked small investors is further reduced by the nature of certain underlying contractual obligations, such as those related to closed-end funds.[6] These allow for losses either to be reversed or spread over a longer-term holding period. Although portfolio losses do not carry the risk of destabilizing the international financial system, there is nevertheless a need for transparency in investment activity, especially in the case of hedge funds; there is also a need for stronger capital adequacy regulations for investment banks and institutional investors.

12. Another implication for market borrowers is that reliance on portfolio investment can make the adjustment process quite rapid following a liquidity crisis, as funds are withdrawn in a short time. In addition, debt renegotiation with respect to portfolio investment in bonds is more

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[5] This argument is analysed by Pier-Luigi Gilbert and Alfred Steinherr, "Private capital flows to emerging markets after the Mexican crises", in G. A. Calvo, M. Goldstein and E. Hochreiter (eds.), *Private Capital Flows to Emerging Markets after the Mexican Crisis*, (Institute for International Economics, Washington D.C., September 1996).

[6] The *World Investment Report, 1997* (annex C, pp. 370-377) analysed the characteristics of different investment mechanisms through which portfolio investment is channelled. Closed-end funds are not required to meet redemption requests and do not therefore need to liquidate their investment at short notice. Consequently, closed-end country funds can be expected to take a longer-term view and are thus less likely to contribute to market volatility resulting from large, sudden sales of securities which can occur with open-end funds.

difficult to organize, given the wide dispersion of bond holders. On the other hand, the experiences of Mexico and East Asian countries (most particularly the Republic of Korea, Malaysia and Thailand) have shown that, in a situation of ample global liquidity, and as long as fundamentals are deemed acceptable by investors, portfolio investment is rapidly resumed as expectations of capital gains are encouraged by low stock prices.

The growing role of institutional investors

13. The institutionalization of savings and investments in developed countries has also contributed to the growth of portfolio investment. The increasing importance of institutional investors (life insurance companies, pension funds and investment funds), especially in countries belonging to the Organisation for Economic Co-operation and Development (OECD), as holders of assets helps to add liquidity to securities markets and has a determining impact on their functioning.

14. Total institutional assets in the main OECD countries amounted to $24.3 trillion in 1995[7] (or 106.5 per cent of their combined GDP). In comparison, the global equity markets in 1995 amounted to nearly $18 trillion and total emerging market capitalization was $1.9 trillion in the same year. The OECD estimated that assets of all investment funds amounted to $5.2 trillion in 1995, a growth of 19 per cent over the 1990-1995 period; total assets under management of hedge funds were estimated at $236 billion in 1995. In 1996, it was estimated that mutual funds all over the world were holding assets of $6.4 trillion, with United States registered mutual funds alone accounting for over $3.5 trillion.[8] In December 1997, it was estimated that the net new cash flow into the entire mutual fund industry in the United States was about $21 billion, bringing the value of net assets of mutual funds in the United States to $4.5 trillion.[9] It is expected that this trend will be reinforced, owing to the demographic evolution in OECD countries. As a result, more savings will be channelled to non-bank institutions, which generally provide higher rates of return than do banking deposit rates.

15. Institutional investors also offer investment vehicles which can respond to different time horizons and risk preferences. For example, the investment fund industry has different types of funds,[10] which include:

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[7] See OECD, "The impact of institutional investors on OECD financial markets", *Financial Market Trends*, no. 68, November 1997, p. 15-54.

[8] Investment Company Institute, *Mutual Fund Fact Book*, 1997.

[9] Investment Company Institute, *Trends in Mutual Fund Investing*, December 1997.

[10] The *World Investment Report* 1997, (annex C, pp. 370-377), analysed in detail the characteristics of venture capital funds, closed-end funds, open-end funds, American depositary receipts, convertible bonds and bonds with equity warrants. Some mechanisms are more suitable to a particular stage of development of an emerging market than others, and some, such as

- venture capital funds;
- closed-end funds;
- open-end funds (or mutual funds);
- hedge funds.

16. Of these categories of funds, hedge funds have perhaps the most speculative investment strategy: they assume high risks on currency, bond and stock markets, and are highly leveraged, relying on large amounts of borrowed money. Within the category of mutual funds, there are a large number of different funds,[11] including stock funds, bond and income funds and money market funds, which can respond to a variety of preferences concerning risks and returns.

17. Institutional investors, and most particularly mutual funds, have diversified their portfolios by investing substantially in emerging markets. Indeed, given the magnitude of their assets, a very small shift (in percentage terms) in their investment portfolio towards emerging markets would result in a substantial increase in the volume of portfolio investment in those markets.

18. In 1996, there were 1,521 global, regional and country emerging market equity funds, of which 298 were closed-end funds and 1,223 were mutual funds, with assets totalling $139 billion.[12] In October 1997, the total number of funds fell to 1,453, with total assets amounting to $122 billion. The fall in the net asset value can be attributed to the immediate impact of the East Asian crisis, as the value of Asian funds has fallen to a greater extent than that of funds in other regions - from $68 billion to $38 billion.

Portfolio fund management

19. Given the major role played by institutional investors in international financial markets, it is important to understand their investment strategies in order to assess their impact on the functioning of financial markets.[13] When discussing the investment behaviour of institutional investors, a distinction will have to be made between institutional investors and professional fund managers, who develop asset allocation strategies and take investment decisions.

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venture capital and closed-end funds, are less likely to contribute to market volatility which can result from the large, sudden sale of securities.

[11] About 21 types of mutual funds can be identified, including stock funds with a growth or capitalization purpose, mixed stock and bond income funds, municipal bond funds, and money market funds. See Investment Company Institute, *Mutual Fund Fact Book*, 1997, pp.24-25.

[12] Information collected by Micropal, a private database on emerging market funds.

[13] This section is largely based on OECD, "The impact of institutional investors on OECD financial markets", *Financial Market Trends*, No. 68, November 1997; the information has been supplemented by articles and surveys on portfolio fund management published in professional journals or by reports of private banks and investment companies.

20. Banks have moved on a large scale into the investment fund business, offering clients a variety of funds for investment. It has been asserted that because of the difference in the regulation of banks and mutual funds, whereby banks have to carry the cost of a higher regulatory burden (in terms of capital and liquidity adequacy), banks have massively expanded their investment-fund-managing activities in search of new income in the form of commissions and fees.

21. Institutional change and consolidation have reduced the number of market participants capable of substantially influencing movements in asset prices. Mergers and acquisitions have concentrated the portfolio of assets under the management of a few major players. It is estimated that the world top 10 fund managers have assets exceeding $4.2 trillion.[14] This trend has been explained by fierce competition in the industry and the need to reduce costs because of heavy investment in information technology.

22. The investment and trading strategies of different types of investment funds can have a decisive influence on financial markets, particularly the less liquid ones. For example, mutual funds are bound by law to redeem their shares at any time upon shareholder request. Because of redemption rights, the assets of shareholders are very liquid. Mutual funds can sometimes commit themselves to offer "deposit-like" liabilities to the owners of assets, in that funds can guarantee a minimum capital value on their liabilities deliverable in cash at short notice, regardless of the value of underlying assets. The high liquidity of mutual funds' assets has several implications. In times of crisis, there is a risk of massive withdrawals by small investors which could force mutual funds to liquidate their investments in several markets, creating a bandwagon effect across sectors and countries.

23. Hedge funds were accused of triggering a foreign exchange crisis by taking positions consistent with an expected realignment of currencies.[15] The highly leveraged hedge funds are prepared to take significant risks in their search for weakness in foreign currencies. Thus market perceptions of inconsistencies or weakness in policies or in financial structure can lead to massive speculative attacks on a country's exchange rate.

24. Other investment and trading strategies can explain "herd behaviour" by institutional investors. The regular performance checks by fund managers against market benchmarks may cause similar behaviour by institutional investors. Moreover, institutions infer information from each other's trade, which may lead to similar decisions. Institutional investors may react to news in a similar manner, thus causing major portfolio shifts in or out of particular financial markets or economies.

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[14] "A hurrying sickness" *Financial Times*, 10 December 1997, Jane Martinson.

[15] The role of speculative activities of hedge funds in precipitating a foreign exchange crisis was highlighted in the cases of the 1992 foreign exchange crisis in the European monetary system and of the recent speculative attacks on the currencies of East Asian countries. See in particular IMF, *International Capital Markets*, 1993 and 1997.

25. In this respect, the role of credit rating agencies has been controversial. The information conveyed by these agencies has a determinant influence on emerging market countries' access to international capital markets. However, recent experience, especially during the East Asian crisis, has shown that credit rating agencies were not able to foresee the crisis and subsequently contributed to its worsening because of the hasty downgrading of some countries. There is perhaps a need for a frank dialogue between credit rating agencies and borrowing countries in order to ensure the accuracy of the information disclosed.

III. PORTFOLIO INVESTMENT AND CAPITAL MARKET DEVELOPMENT

26. Portfolio investment in capital markets is effected by purchases of bonds and equities issued by companies or governments. Most of the time, bonds are issued in international markets, while the majority of equities purchased by foreign investors are issued in domestic markets. Companies from emerging markets are increasingly tapping international capital markets through listing on major foreign stock markets and issuance of global and American depositary receipts (GDRs and ADRs). Portfolio investors are thus attracted by a thriving corporate sector and a growing stock market. Indeed, while the low level of international interest rates has played an important role in the surge of portfolio flows to emerging markets, the higher returns and improvement in market infrastructure have encouraged foreign investors to adopt a dynamic and sustained strategy of portfolio diversification in these markets.

27. Development of stock markets has taken place in the context of a generalized policy of developing a diversified financial system which would cater for the different needs of borrowers and investors. Stock markets would allow diversification of company ownership (particularly in a privatization process), more efficient risk sharing, and a healthier financial structure for corporations by improving their debt/equity ratios. Furthermore, stock markets can play another role monitoring the corporate sector through asset prices. In an "efficient" market, asset prices play a signalling role for capital allocation and corporate control. As asset prices reflect the information available on markets, it is important that timely and accurate information reach market participants who should be able to analyse it. Excess price volatility, which does not reflect the volatility of fundamentals,[16] will undermine the signalling role of asset prices. In turn, a healthy banking sector is a *sine qua non* for the emergence and development of capital markets, not least

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[16] Financial analysts usually distinguish between fundamental volatility and excess volatility. Fundamental volatility reflects the fact that security prices change when the fundamental value of the security changes, such as when the expected future streams of income change. In contrast, excess volatility occurs when security prices change for reasons unrelated to the fundamental value. Speculative bubbles could feed excess volatility, because of expectations about future additional price increases which are not justified by expected improvements in fundamentals. See Joseph E. Stiglitz, "Symposium on bubbles", *Journal of Economic Perspectives*, no. 4, Spring 1990.

because banks play an essential role in the payment and settlement process in securities transactions.

28. In a survey of managers of international equity investment funds undertaken by UNCTAD,[17] fund managers identified the following six factors which are of importance for investment decisions (in descending order of frequency):

- Market growth potential as an element in determining the level of attractiveness of a market;
- A favourable environment for foreign investors (including macroeconomic stability) and the degree of ease with which investment proceeds can be repatriated;
- The adequacy, availability and reliability of financial information and the level of financial disclosure standards;
- Political stability and a good settlement system;
- The comprehensiveness of securities market regulations. Such regulations govern exchange membership, trading, clearing and settlement as well as the activities of financial intermediaries, and they seek to ensure market integrity and stability, and investor protection. The degree of effectiveness in enforcing these regulations is a closely related consideration;
- A stable currency and a liquid securities market. A relatively stable currency protects investors from foreign exchange risk and allows them to plan more effectively by reducing the potential for sudden shifts in currency value. The level of liquidity of the securities market is generally important because it often acts as an exit mechanism through which investment positions are liquidated.

29. In turn, foreign portfolio investment can contribute to the development of local securities markets in a number of ways. First, by providing an additional supply of capital to supplement domestic savings, foreign investment contributes to a reduction in the cost of capital, thereby stimulating a greater supply of securities and fostering the expansion of the corporate sector. Second, by adding liquidity to local markets, foreign investment could reduce the volatility which results from the thinness of markets. Third, it can improve corporate governance in so far as foreign investors demand higher disclosure standards. Fourth, it can strengthen domestic stock markets, as foreign investors demand timely and quality information, as well as minority shareholder protection, and require adequate market and trading regulations. Lastly, it can encourage the development of new institutions and services (such as asset management and investment banking services and custody services), transfer of technology and training of local personnel. All this will contribute to the strengthening of domestic financial systems and support a competitive capital market which will mitigate over-reliance on bank lending (and improve the debt/equity structure of domestic companies).

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[17] See UNCTAD, *Foreign Investment in LDCs: Prospects and Constraints* (UNCTAD/GDS/GFSB/2) 18 June 1997.

30. It has been found that stock market capitalization and turnover in countries that have received the highest levels of portfolio equity flows have increased more than in countries receiving lower levels of flows. Also, the number of listings on the stock exchanges rose during the inflow period.[18]

31. On the negative side, however, foreign investment can generate more volatility of asset prices on domestic capital markets. It has been found that the period following the upsurge in private capital flows in 1993 was marked by an increase in volatility of stock market prices in the majority of emerging markets which received important flows of foreign investment[19]. Although it is not completely certain that this increase in volatility was entirely due to an increase in the participation of foreign investors in domestic markets, in some countries a positive correlation between foreign portfolio equity investment and volatility of stock market prices has been observed. This can be explained by the fact that large inflows and outflows of foreign investment can have an important impact on domestic asset prices, especially in insufficiently developed markets. Better liquidity reduces transaction costs and makes it easier for foreign investors to open and liquidate positions. Volatility can also result from problems of asymmetrical information and herding behaviour. Portfolio fund managers, managing portfolios worldwide, may not have access to detailed and accurate information on emerging markets. Information asymmetries could result in an amplification of price fluctuations, as foreign investors may overreact to any change occurring in these markets. Benchmark performance evaluation and reliance on the same external rating agencies may also increase the tendency towards herd behaviour.

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[18] See World Bank, *Private Capital Flows to Developing Countries*, 1997. The World Bank found significant spillovers into the financial system deriving from foreign portfolio investment, notably through an increase in market liquidity and turnover.

[19] See UNCTAD: "Foreign portfolio investment: implications for the growth of emerging capital markets", (UNCTAD/GDS/GFSB/3), forthcoming. Of the 11 countries/economies (Argentina, Brazil, Chile, Hong Kong, India, Malaysia, Mexico, Pakistan, Singapore, Taiwan Province of China and Zimbabwe) for which volatility indices of monthly stock market returns during the period 1987-1997 have been calculated (using the ARCH methodology), only Taiwan Province of China and Argentina did not show an increase in volatility after 1993. The former applies controls on foreign investment in the stock market, while in the latter, volatility was very high prior to 1993 because of domestic monetary disturbances. Other studies, on the contrary, found that asset price volatility in emerging markets did not increase during the high inflow period. The findings depend, of course on the methodology used to estimate volatility. Most of these empirical studies were undertaken in 1995-1996, covering a period which preceded the financial turbulence in emerging markets in 1995 and 1997. See, for example, Anthony Richards, "Volatility and predictability in national stock markets: How do emerging and mature markets differ?", IMF Staff Papers 43, September 1996; Geert Bekaert and Campbell R. Harvey, "Emerging market volatility", National Bureau of Economic Research, Working Paper 5307 Cambridge, Massachusetts, 1995; IMF, *International Capital Markets*, 1995.

32. An increase in asset price volatility will increase the risk premium and thus the cost of raising capital on local markets. It may even trigger liquidity crises. This will stifle the development of local stock markets as there will be fewer companies willing to be listed. Volatility will also weaken the role of asset prices in allocating capital to the most productive uses.

33. One possible response to counterbalance the influence of foreign investors is to develop a strong domestic institutional investor base. Domestic institutional investors, which can mobilize significant amount of resources, can act as a market stabilizer in the event of a massive liquidation of assets by foreign investors.

34. Alongside the short-term volatility of asset prices, the volatility of financial flows can manifest itself in the form of boom-bust cycles accompanied by wide fluctuations in asset prices. This will cause a serious economic recession when the asset bubble bursts. In a situation of massive reversal of foreign investment, this will depress domestic asset prices and have another negative impact on the health of the domestic financial system. Financial institutions may face liquidity squeezes and serious financial losses. Borrowing costs will increase and higher volatility entails great economic uncertainty which will further depress the economy. In addition, steep increases in short-term interest rates in an effort to defend the currencies will further depress the stock markets.

35. As will be seen in the following sections, financial liberalization without strong fundamentals and strong prudential and regulatory frameworks in the financial sector increases the risk of boom-bust cycles resulting from excess capital inflows beyond the absorptive capacity of recipient countries. Also, it will expose the recipient country to more sources of external disturbances and increase the speed at which financial crisis is transmitted from one market to another.

IV. MARKETS AND FUNDAMENTALS: CAUSES OF VOLATILITY

36. The structural changes in international financial markets, notably the securitization process and the growing influence of mutual funds, might lead to more volatility of capital flows. However, it would not necessarily be the case that higher volatility would result therefrom, if the economic environment is stable.

37. The 1990s have witnessed a surge in private capital flows to emerging markets, but also repeated episodes of widespread and profound financial crises: in Mexico in 1994-1995 and currently in East Asia. The East Asian crisis appears to be spreading more widely and having a greater impact on the world economy than the earlier Mexican crisis. Both crises started with a speculative attack on currencies. The crisis on foreign exchange markets spread rapidly to the stock markets, and the risk of contagion was high since the transmission of crisis was rapid (through asset prices).

38. The defence of currencies rapidly depleted the countries' foreign exchange reserves. A sharp liquidity crisis ensued, as sources of short-term capital were abruptly cut. In the case of

Mexico, the crisis stemmed mainly from non-renewal by portfolio investors of short-term bond issued by the Government (tesobonos). In the case of the East Asian countries, the crisis wa caused by banks' refusal to rollover short-term credits to private sector borrowers.

39. In both cases there has been an accusation of pro-cyclical behaviour by portfolio investo (mutual funds and hedge funds) which has contributed to exacerbating the liquidity crisis. In particular, the role of hedge funds in intensifying speculative attacks on currencies has been muc discussed.[20] However, it has been asserted elsewhere that emerging market funds did not sh investment in a manner that would exacerbate price swings. According to one source information,[21] investment funds quite frequently bought shares when prices were falling and so in rising markets, thus contributing to stabilizing markets.

40. Indeed, portfolio investment is capable of rapid recovery after the first shock waves. Mexico, there were substantial outflows of portfolio investment during the last quarter of 19 and the three first quarters of 1995, by the last quarter of 1995 portfolio investment had large recovered, and it increased substantially in 1996 and the first half of 1997. Likewise, portfol investment showed signs of recovery in some East Asian countries by the beginning of 1998. The rally on Asian stock markets helped to strengthen those countries' currencies.

41. During the recent currency crises, portfolio investment showed high volatility. In situation of currency depreciation, and in the absence of suitable hedging mechanisms to redu price or currency risks, portfolio investors withdrew their investments in a panic. In so doing th exacerbated the decline in currency and asset prices. However, as asset prices decline opportunities for profit increased, especially as the liquidity crisis was dampened and fundamenta improved.

42. Volatility of capital flows is thus associated with boom-bust cycles of domestic marke It is important, therefore, to understand the mechanics and causes of these cycles in order identify appropriate policies for dealing with problems created by unstable flows.

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[20] The IMF in particular has referred to the role of hedge funds in the currency crisis. "t growing institutionalization of savings and the participation of institutional investors international markets have been an important source of demand for emerging market securiti but they have also led to the growth of highly leveraged hedge funds and proprietary traders w are prepared to tolerate significant risk in their search for weaknesses in foreign exchan arrangements" (IMF, *International Capital Markets*, 1997, p. 33).

[21] John Rea, "US Emerging market funds: Hot money or stable source of investm capital?", *Investment Company Institute Perspective*, vol. 2, no. 6, December 1996.

[22] The *Financial Times* has on several occasions reported a portfolio investment rally Asia: "Asia sounds wake-up call" (9 February 1998), "Fund managers recover faith in As equities" (10 February 1998) and "US investors target low-value Asia assets" (24 Febru 1998).

Fundamentals and policy dilemmas

43. Frequent financial crisis can be a manifestation of the thin margin of policy manoeuvre that developing countries and countries in transition are facing in the global context of liberalization of trade and capital flows. Two particular policy dilemmas are worth mentioning in relation to the discussion on the causes of financial crisis.

Capital flows and fundamentals

44. In a world of mobile private capital, the volume of capital flows will depend on a number of factors, most particularly the level of domestic interest rates (as compared with foreign interest rates) and strong fundamentals[23] (as captured by strong growth prospects which would allow higher returns on capital, as well as by strong export growth which would guarantee the availability of foreign exchange to reward foreign capital). Also, a high level of domestic savings will also be a guarantee for potential cushioning of any temporary reversal of capital flows. In addition, a stable macroeconomic environment will help to reduce the risks of asset price fluctuations.

45. However, in the context of ample liquidity on international capital markets, capital tends to overflow into a few countries which appear to have strong fundamentals (high GDP and export growth, a high level domestic savings, and macroeconomic stability). Excess capital inflows can create problems which are the seeds of future financial crisis:

- real currency appreciation which will weaken export competitiveness;
- excess liquidity in the financial system which might lead to asset bubbles in the property and stock markets, or excessive lending to risky or unproductive projects. If the banking and financial regulations and supervision are weak and if corporate governance is poor, excess liquidity will rapidly result in financial difficulties affecting local banks and corporation, especially if domestic interest rates have subsequently to be raised in order to attract capital flows.

46. The dilemma is how countries receiving large inflows of capital can prevent them from creating conditions that can lead to currency crisis, and whether it is possible to determine what is a sustainable level of capital inflows.

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[23] The definition of a country's right fundamentals on the basis of which investment decisions are made is a source of endless debate. Credit rating agencies include a long list of factors related to major concerns about political risk, income and economic structure, economic growth prospects, fiscal flexibility, public debt burden, price stability, balance-of-payments flexibility, external debt and liquidity. See, for example Standard and Poors, "Sovereign credit rating: A primer", *Standard & Poor's Credit Week*, 16 April, 1997. Recently, another factor - the health of the domestic financial system - has been taken into consideration. But in general, surveys of fund managers have shown that the most important fundamental indicators concern GDP and export growth, macroeconomic stability and a high level of domestic savings.

Capital mobility, exchange rate and domestic monetary autonomy

47. The second policy dilemma concerns the choice of exchange rate policy. It is very difficult to maintain simultaneously free movement of capital, domestic monetary autonomy and a fixed exchange rate. For example, many countries have chosen a fixed exchange rate as a monetary anti-inflation anchor. The stability of the exchange rate might encourage more capital inflows, which, if not sterilized, will increase the money supply and through an inflationary effect appreciate the real exchange rate. Fixed exchange rates might also encourage heavy borrowing in foreign currencies, in circumstances where the domestic interest rates are higher than foreign rates, especially when domestic borrowers do not foresee any exchange rate risk.

48. On the other hand, a flexible exchange rate system can create other types of problems. In this case, the exchange rate will fluctuate with movements in capital flows and can undermine the allocation of resources to the tradables sector. Moreover, if the reversal of capital flows is large enough (sometimes for reasons external to the domestic economy), the exchange rate may go into a self-reinforcing slide.

Speculative attacks and contagion

49. The attack on the currencies of Mexico and the East Asian countries resulted from the perception by markets of an overvaluation of their currencies due to persistently high current account deficits (at least in the cases of Mexico and Thailand). The suddenness and magnitude of the attack and the deep currency depreciation which followed are signs of the high volatility of capital flows. In the wake of the currency crises, stock markets were immediately depressed, adding another negative impact on the economy.

50. It has been asserted that speculative attacks on currencies merely bring forward in time the need for policy adjustment on the part of affected countries and that speculators merely function as early spotters of problems that countries need to address anyway. In a few cases, it has been noted that by taking early adjustment measures, countries have managed to minimize the impact of speculative attacks. Nevertheless, the magnitude of such attacks and the abrupt adjustment process which followed imposed high costs on the economies affected and on the international community, as enormous amounts of reserves and additional liquidity (provided by the international community) were needed in order to defend the currencies, and economic and social hardship was endured by the local population.

51. Rapid contagion of neighbouring countries has also occurred. The great susceptibility to contagion might result from a number of factors:

- a regional effect[24] (because neighbouring countries are classified in the same risk category or because of the expectation that exchange rates will be changed under the pressure of competitiveness or because of strong intraregional trade and financial links),
- similar economic structure or policy characteristics,
- weak "fundamentals",
- market imperfections: investors' first reaction is to withdraw from emerging markets in a panic, despite the existence of good fundamentals.

52. There is evidence that the contagious impact of crisis can be significant at the regional or subregional level.[25]

V. POLICY ISSUES

53. In the context of worldwide liberalization of capital flows and ample liquidity on international capital markets, finance is more easily available, but at the same time more volatile. Capital mobility has reduced the domestic policy autonomy of all countries, but most particularly of developing countries and countries in transition.

54. The Mexican and East Asian crises highlighted the drawbacks of excess capital inflows in an environment characterized by a weak regulatory framework of domestic financial systems and weak corporate governance. With many capital markets in developing countries now embarking on more liberalization of capital flows (including wider opening of domestic capital markets to foreign investment),[26] the challenge of managing capital flows has become more complex. Two particular problems need to be addressed: how to reduce the volatility of capital flows (and its impact on the volatility of domestic asset prices) and how to avoid boom-bust

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[24] The regional effect of the two crises is noticeable. Charts reproducing the evolution of the monthly indices of equity returns on local stock markets clearly show that during the Mexican crisis of 1994-1995, the indices of Latin American countries had a synchronized downturn, while Asian countries were not affected. During the recent East Asian crisis, the indices of East Asian countries declined sharply from the beginning of 1997, while Latin American countries enjoyed an upturn.

[25] For a study of the contagion of the Mexican crisis, see Sara Calvo and Carmen M. Reinhart. "Capital flows to Latin America: Is there evidence of contagion effects?" in G.A. Calvo, M. Coldstein and E. Hochreiter (eds.), *Private Flows to Emerging Markets after the Mexican Crisis*, Washington D.C., Institute for International Economics, September 1996. For a study of contagion during the recent Asian crisis, see UNCTAD, "Foreign portfolio investment: Implications for the growth of emerging capital markets", (UNCTAD/GDS/GFSB/3), forthcoming.

[26] In the wake of the currency crisis, most East Asian countries have adopted measures to liberalize further their capital markets. The Republic of Korea, for example, has allowed free entry of foreign investors into its capital markets, including short-term money markets.

cycles by reducing excess capital inflows. These are very complex issues which perhaps need to be tackled by a variety of measures, at the national and international level. The questions below, which are suggested for consideration, are among those which have been given greatest attention.

55. Concerning the issue of volatility, consideration could be given to the following questions:

- How important is the development of a strong domestic institutional investor base (e.g. pension funds, insurance companies, investment funds)?
- How important are: (a) development of a clear legal and enforcement framework for corporate enterprises (information disclosure, listing requirements, accounting standards, etc.), market intermediaries and other non-bank institutions (such as brokers, credit rating agencies, and institutional investors); and (b) information sharing on best practices for capital market development and regulations?
- Should there be direct measures to encourage more stable capital inflows, such as reserve requirements on capital inflows, a minimum time-limit for capital repatriation, and a capital gains or turnover tax?

56. Concerning the issue of excess capital inflows, consideration could be given to the following questions:

- What would be the pros and cons of temporary or permanent direct measures to oversee inflows, especially short-term borrowing by domestic banks and non-bank institutions?
- What would be the role of the exchange rate regime?

57. At the international level, it appears that the recent currency crises in emerging markets did not represent a systemic risk to the stability of the international financial system, to the same extent as the debt crisis of the 1980s did. However, the risk of recession is high because of the abrupt adjustment process endured by the economies in crisis. Some consideration, therefore, needs to be given to preventing the recurrence of such crises. For example, what measures could be promoted to reduce the volatility of capital flows and herd behaviour by international investors? Is it necessary to have more transparency and disclosure regarding institutional investors' leveraged operations? Is it necessary to regulate mutual funds in the same way as banks, i.e. through prudential requirements concerning capital adequacy? What arrangements could be developed to allow more orderly debt restructuring once a crisis occurs, when countries rely heavily on bonds as a source of external financing?